

# RAW SEQUENCE LISTING PATENT APPLICATION: US/09/580,515

DATE: 09/06/2001  
TIME: 11:21:40

Input Set : N:\Crif3\RULE60\09580515.txt  
Output Set : N:\CRF3\09062001\I580515.raw

4 <110> APPLICANT: Krets, Keith  
6 <120> TITLE OF INVENTION: NOVEL PHYTASE  
9 <130> FILE REFERENCE: 19017023003  
11 <140> CURRENT APPLICATION NUMBER: 09/580,515  
C--> 12 <141> CURRENT FILING DATE: 1999-05-25  
14 <150> PPIOF APPLICATION NUMBER: 09/318,528  
15 <151> PPIOF FILING DATE: 1999-05-25  
17 <150> PPIOF APPLICATION NUMBER: 09/291,931  
18 <151> PPIOF FILING DATE: 1999-04-17  
20 <150> PPIOF APPLICATION NUMBER: 09/310,798  
21 <151> PPIOF FILING DATE: 1999-08-13  
23 <150> PPIOF APPLICATION NUMBER: 09/259,214  
24 <151> PPIOF FILING DATE: 1999-03-01  
26 <160> NUMBER OF SEQ ID NOS: 4  
28 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
30 <210> SEQ ID NO: 1  
31 <211> LENGTH: 1323  
32 <212> TYPE: DNA  
33 <213> ORGANISM: Escherichia coli  
35 <220> FEATURE:  
36 <221> NAME/KEY: CDS  
37 <222> LOCATION: 1... (1323)  
39 <221> NAME/KEY: misc\_feature  
40 <222> LOCATION: 1... (1323)  
41 <223> OTHER INFORMATION: n = A,T,C or G  
43 <400> SEQUENCE: 1  
44 atg aaa gcg atc tta atc cca ttt tta tct ctt ctg att ccg tta acc 48  
45 Met Lys Ala Ile Leu Ile Pro Phe Leu Ser Leu Leu Ile Pro Leu Thr  
46 1 5 10 15  
48 ccg caa tct gca ttc gct cag agt cag ccg gag ctg aag ctg gaa agt 96  
49 Pro Gln Ser Ala Phe Ala Gln Ser Glu Pro Glu Leu Lys Leu Glu Ser  
50 20 25 30  
52 gtg gtg att gtc agt cgt cat ggt gtg cgt gct cca acc aag gcc acg 144  
53 Val Val Ile Val Ser Arg His Gly Val Arg Ala Pro Thr Lys Ala Thr  
54 35 40 45  
56 caa ctg atg cag gat gtc acc cca gac gca tgg cca acc tgg ccg gta 192  
57 Gln Leu Met Gln Asp Val Thr Pro Asp Ala Trp Pro Thr Trp Pro Val  
58 50 55 60  
W--> 60 aaa ctg ggt tgg ctg aca ccg cgn ggt ggt gag cta atc gcc tat ctc 240  
61 Lys Leu Gly Trp Leu Thr Pro Arg Gly Gly Glu Leu Ile Ala Tyr Leu  
62 65 70 75  
64 gga cat ttc caa cgc cag cgt ctg gta gcc gac gga ttg ctg gcg aaa 288  
65 Gly His Tyr Gln Arg Gln Arg Leu Val Ala Asp Gly Leu Leu Ala Lys  
66 80 85 90  
68 aag ggc tgc ccg cag tct cgt cag gtc gcg att att gct gat gtc gac 336  
69 Lys Gly Cys Pro Gln Ser Gly Gln Val Ala Ile Ile Ala Asp Val Asp  
70 100 105 110

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# RAW SEQUENCE LISTING PATENT APPLICATION: US/09/580,515

DATE: 12/16/2001  
 TIME: 11:21:43

Input Set : N:\CrF3\RULE60\09580515.txt  
 Output Set: N:\CRF3\09062001\I580515.raw

72	gag cgt acc cgt aaa aca ggc gaa gcc ttc gcc gcc ggg ctg gca cct	384
73	Glu Arg Thr Arg Lys Thr Gly Glu Ala Phe Ala Ala Gly Leu Ala Pro	
74	115 120 125	
76	gac tgt gca ata acc gta cat gcc cag gca gat acg tcc agt ccc gat	432
77	Asp Cys Ala Ile Thr Val His Thr Gln Ala Asp Thr Ser Ser Pro Asp	
78	130 135 140	
80	ccg tta ttt aat cct cta aaa act ggc gtt tgc caa ctg gat aac ggc	480
81	Pro Leu Phe Asn Pro Leu Lys Thr Gly Val Cys Gln Leu Asp Asn Ala	
82	145 150 155 160	
84	aac gtg act gac gcc atc ctc agc agg gca gga ggg tca att gct gac	528
85	Asn Val Thr Asp Ala Ile Leu Ser Arg Ala Gly Gly Ser Ile Ala Asp	
86	165 170 175	
88	ttt acc ggg cat cgc caa acg ccg ttt cgc gaa ctg gaa ccg gtg ctt	576
89	Phe Thr Gly His Arg Gln Thr Ala Phe Arg Glu Leu Glu Arg Val Leu	
90	180 185 190	
92	aat ttt ccg caa tca aac ttg tgc ctt aaa cgt gag aaa cag gac gaa	624
93	Asn Phe Pro Gln Ser Asn Leu Cys Leu Lys Arg Glu Lys Gln Asp Glu	
94	195 200 205	
96	agc tgt tca tta acg cag gca tta cca tgc gaa ctc aag gtg agc gcc	672
97	Ser Cys Ser Leu Thr Gln Ala Leu Pro Ser Glu Leu Lys Val Ser Ala	
98	210 215 220	
100	gac aat gtc tca tta acc ggt ggc gta agc ctc gca tca atg ctg acg	720
101	Asp Asn Val Ser Leu Thr Gly Ala Val Ser Leu Ala Ser Met Leu Thr	
102	225 230 235 240	
104	gag ata ttt ctc ctg caa caa gca cag gga atg ccg gag ccg ggg tgg	768
105	Glu Ile Phe Leu Leu Gln Gln Ala Gln Gly Met Pro Glu Pro Gly Trp	
106	245 250 255	
108	gga agg atc acc gat tca cag cag tgg aac acc ttg cta agt ttg cat	816
109	Gly Arg Ile Thr Asp Ser His Gln Trp Asn Thr Leu Leu Ser His	
110	260 265 270	
112	aac ggc caa ttt tat ttg cta caa cgc acg cca gag gtt gcc cgc agc	864
113	Asn Ala Gln Phe Tyr Leu Leu Gln Arg Thr Pro Glu Val Ala Arg Ser	
114	275 280 285	
116	cgc gcc acc ccg tta ttg gat ttg atc atg gca gcc ttg acc ccc cat	912
117	Arg Ala Thr Pro Leu Leu Asp Leu Ile Met Ala Ala Leu Thr Pro His	
118	290 295 300	
120	cra ccg caa aaa cag gcc tat ggt gtg aca tta ccc act tca gta ctg	960
121	Pro Pro Gln Lys Gln Ala Tyr Gly Val Thr Leu Pro Thr Ser Val Leu	
122	305 310 315 320	
124	ttt att gcc gga cac gat act aat ctg gca aat ctc ggc gcc gca ctg	1008
125	Phe Ile Ala Gly His Asp Thr Asn Leu Ala Asn Leu Gly Gly Ala Leu	
126	325 330 335	
128	gag ctc aac tgc acg ctt ccc ggt cag ccg gat aac acc ccg cca ggt	1056
129	Glu Leu Asn Trp Thr Leu Pro Gly Gln Pro Asp Asn Thr Pro Pro Gly	
130	340 345 350	
132	ggt gaa ctg gtg ttt gaa cgc tgg cgt ccg cta agc gat aac agc cag	1104
133	Gly Glu Leu Val Phe Glu Arg Trp Arg Arg Leu Ser Asp Asn Ser Gln	
134	355 360 365	
136	tgg att cag gtt tgc ctg gcc ttc cag act tta cag cag atg cgt gat	1152

# RAW SEQUENCE LISTING

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Input Set : N:\Crif3\RULE60\09580515.txt  
Output Set: N:\CRF3\09062001\I580515.raw

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137 Thr Ile Gln Val Ser Leu Val Phe Gln Thr Leu Gln Gln Met Arg Asp
138      370      375      380      1200
140 aaa acg ccg ctg tca tta aat acg ccg ccc gga gag gtg aaa ctg acc
141 Lys Thr Pro Leu Ser Leu Asn Thr Pro Pro Gly Glu Val Lys Leu Thr
142 385      390      395      1246
144 cgg gca gga tgt gaa gag cga aat gcg cag gcc atg tgt tgg gca
145 Leu Ala Gly Cys Glu Glu Arg Asn Ala Gln Gly Met Cys Ser Leu Ala
146      405      410      415      1296
147 ggt ttt acg caa atc gtg aat gaa gca cgc ata ccg gcg tgc agt ttg
148 Gly Phe Thr Gln Ile Val Asn Glu Ala Arg Ile Pro Ala Cys Ser Leu
149      420      425      430      1323
150      440
152 aat tct cat cac cat cac cat cac taa
153 Arg Ser His His His His His His
154      435      440
157 -1100- SEQ ID NO: 2
158 -1110- LENGTH: 440
159 -1120- TYPE: PRT
160 -1130- ORGANISM: Escherichia coli
162 -400- SEQUENCE: 2
163 Met Lys Ala Ile Leu Ile Pro Phe Leu Ser Leu Leu Ile Pro Leu Thr
164      5      10      15
165 Pro Gln Ser Ala Phe Ala Gln Ser Glu Pro Glu Leu Lys Leu Glu Ser
166      20      25      30
167 Val Val Ile Val Ser Arg His Gly Val Arg Ala Pro Thr Lys Ala Thr
168      35      40      45
169 Gln Leu Met Gln Asp Val Thr Pro Asp Ala Trp Pro Thr Trp Pro Val
170      50      55      60
171 Lys Leu Gly Trp Leu Thr Pro Arg Gly Gly Glu Leu Ile Ala Tyr Leu
172 65      70      75      80
173 Gly His Tyr Gln Arg Gln Arg Leu Val Ala Asp Gly Leu Leu Ala Lys
174      85      90      95
175 Lys Gly Cys Pro Gln Ser Gly Gln Val Ala Ile Ile Ala Asp Val Asp
176      100      105      110
177 Glu Arg Thr Arg Lys Thr Gly Glu Ala Phe Ala Ala Gly Leu Ala Pro
178      115      120      125
179 Asp Cys Ala Ile Thr Val His Thr Gln Ala Asp Thr Ser Ser Pro Asp
180      130      135      140
181 Pro Leu Phe Asn Pro Leu Lys Thr Gly Val Cys Gln Leu Asp Asn Ala
182 145      150      155      160
183 Asn Val Thr Asp Ala Ile Leu Ser Arg Ala Gly Gly Ser Ile Ala Asp
184      165      170      175
185 Phe Thr Gly His Arg Gln Thr Ala Phe Arg Glu Leu Glu Arg Val Leu
186      180      185      190
187 Asn Phe Pro Gln Ser Asn Leu Cys Leu Lys Arg Glu Lys Gln Asp Glu
188      195      200      205
189 Ser Cys Ser Leu Thr Gln Ala Leu Pro Ser Glu Leu Lys Val Ser Ala
190      210      215      220
191 Asp Asn Val Ser Leu Thr Gly Ala Val Ser Leu Ala Ser Met Leu Thr
192 225      230      235      240

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PATENT APPLICATION: US/09/580,515

DATE: 09/06/2001  
TIME: 11:21:40Input Set : N:\Crif3\RULE60\09580515.txt  
Output Set: N:\CRF3\09062001\I580515.raw

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127 Glu Ile Phe Leu Leu Gln Gln Ala Gln Gly Met Pro Glu Pro Gly Trp
128
129 Gly Arg Ile Thr Asp Ser His Gln Trp Asn Thr Leu Leu Ser Leu His
130
131 Asn Ala Gln Phe Tyr Leu Leu Gln Arg Thr Pro Glu Val Ala Arg Ser
132
133 Arg Ala Thr Pro Leu Leu Asp Leu Ile Met Ala Ala Leu Thr Pro His
134
135 Fr. Pro Gln Lys Gln Ala Tyr Gly Val Thr Leu Pro Thr Ser Val Leu
136
137 Phe Ile Ala Gly His Asp Thr Asn Leu Ala Asn Leu Gly Gly Ala Leu
138
139 Glu Leu Asn Trp Thr Leu Pro Gly Gln Pro Asp Asn Thr Pro Pro Gly
140
141 Gly Glu Leu Val Phe Glu Arg Trp Arg Arg Leu Ser Asp Asn Ser Gln
142
143 Trp Ile Gln Val Ser Leu Val Phe Gln Thr Leu Gln Gln Met Arg Asp
144
145 Lys Thr Pro Leu Ser Leu Asn Thr Pro Pro Gly Glu Val Lys Leu Thr
146
147 Leu Ala Gly Cys Glu Glu Arg Asn Ala Gln Gly Met Cys Ser Leu Ala
148
149 Gly Phe Thr Gln Ile Val Asn Glu Ala Arg Ile Pro Ala Cys Ser Leu
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151 Arg Ser His His His His His His
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210 1101 SEQ ID NO: 3  
211 1111 LENGTH: 44  
212 1112 TYPE: DNA  
213 1113 ORGANISM: Artificial Sequence  
214 1120 FEATURE:  
215 1123 OTHER INFORMATION: Oligonucleotide  
216 1400 SEQUENCE: 5  
217 gttttctgaat tcaaggagga atttaaataa aagcgatctt aatccatt  
218  
219 1101 SEQ ID NO: 4  
220 1111 LENGTH: 33  
221 1112 TYPE: DNA  
222 1113 ORGANISM: Artificial Sequence  
223 1120 FEATURE:  
224 1123 OTHER INFORMATION: Oligonucleotide  
225 1400 SEQUENCE: 4  
226 gttttctggat ctttadaaac tgcacgcgg tat

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9/6/01

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/580,515

DATE: 04/06/01  
TIME: 11:01:41

Input Set : N:\Crf3\RULE60\09580515.txt  
Output Set: N:\CRF3\09062001\I580515.raw

L:12 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:60 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#1